

## SEQUENCE LISTING

<110> C. Frank Bennett  
Kenneth Dobie

<120> ANTISENSE MODULATION OF SUPEROXIDE DISMUTASE 1, SOLUBLE  
EXPRESSION

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<150> 2001-06-21

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tgataaacca gaaataagtg aaatgctgtt tgttcataaa tatgtacttt atcaaatgta 10560  
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ttaaatttac agataaatat 11000

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gacttgggca atgtgactgc tgacaaagat ggtgtggccg atgtgtctat tgaagattct 180  
gtgatctcac tctcaggaga ccattgcatc attggccgca cactgggtgg ccatgaaaaa 240  
gcagatgact tgggcaaagg tggaaatgaa gaaagtacaa agacaggaaa cgctggaagt 300

cgtttggtt gtggtgtaat tgggatcgcc caataaacat tcccttgat gtagtctgag 360  
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actgtaatct taaaaaaaa 438

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caggacctcg gcgtggccta gcgagttatg gcgacgaagg ccgtgtgcgt gctgaagggc 180  
gacggccagt tgcagggcac catcaatttc gacgagaagg aaagtaatgg accagtgaag 240  
gtgtggggaa gcattaaagg actgactgaa ggctgcatg gattccatgt tcatgagtgt 300  
ggagataata cagcaggctg taccagtgcg ggtcctcact ttaatcctct atccagaaaa 360  
cacggtgggc caaaggatga agagaggcat gttggagact tgggcaatgt gactgctgac 420  
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cgaggactgc aacggaaacc 20

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ggttccgagg actgcaacgg 20

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gaggtcctgg ttccgaggac 20

<210> 20  
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agtcctttaa tgcttcccca

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<210> 29

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caggccttca gtcagtcctt

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<212> DNA

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<400> 30

tatctccaaa ctcatgaaca

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<210> 31

<211> 20

<212> DNA

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<223> Antisense Oligonucleotide

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<210> 32

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gtacagcctg ctgtattatc

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<210> 33  
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<400> 33  
tgcccaagtc tccaacatgc

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<210> 34  
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cacattgccc aagtctccaa

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<210> 35  
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<210> 36  
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<400> 36  
catcgccac accatctttg

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<210> 37  
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&lt;223&gt; Antisense Oligonucleotide

&lt;400&gt; 37

acacatcggc cacaccatct

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&lt;210&gt; 38

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Antisense Oligonucleotide

&lt;400&gt; 38

tagacacatc ggccacacca

20

&lt;210&gt; 39

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Antisense Oligonucleotide

&lt;400&gt; 39

accaccagtg tgcggccaat

20

&lt;210&gt; 40

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Antisense Oligonucleotide

&lt;400&gt; 40

catggaccac cagtgtgcgg

20

&lt;210&gt; 41

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Antisense Oligonucleotide

&lt;400&gt; 41

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<210> 47

<211> 20

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<400> 47

agtcacacaa ttacactttt

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<210> 48

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

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<400> 48

ctcactacag gtactttaaa

20

<210> 49

<211> 20

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<211> 20

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<210> 51  
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<210> 52  
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aactgagttt tataaaacta

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<210> 56

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<210> 57

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<400> 57

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atacaggtca ttgaaacaga

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<210> 62  
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agtttaatac ccatctgtga 20

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<210> 65

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<400> 65

acaggcttga atgacaaaga

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<210> 69

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<210> 72  
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<400> 73  
tcataataag tgccatacag 20

<210> 74  
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<210> 77  
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<210> 78  
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<210> 79  
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<210> 82  
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caggagaatc gcttgaacct 20

<210> 83  
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ctggtacagc ctatttataa 20

<210> 84  
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<400> 84  
gcttcacgtc tacacactaa 20

<210> 85  
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tccaacatgc ctaataatga 20

<210> 86  
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<400> 86  
tggtacagcc ttctgctcga 20

<210> 87  
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<400> 87

taggccagac ctccgcgcct

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<210> 88

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actttatagg ccagacotcc

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<210> 89

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<220>

<223> Antisense Oligonucleotide

<400> 89

gacgcaaacc agcaccccgt

20

<210> 90

<211> 20

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<400> 90

acgctgcagg agactacgac

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gcacacggcc ttcgtcgcca

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<210> 92  
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ttcagcacgc acacggcctt 20

<210> 93  
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ccttcagcac gcacacggcc 20

<210> 94  
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cgcccttcag cacgcacacg 20

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tcgcccttca gcacgcacac 20

<210> 97  
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<210> 98  
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<210> 102  
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ctccaacatg cctctcttca 20

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tctccaacat gcctctcttc 20

<210> 104  
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gtctccaaca tgcctctctt 20

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<210> 106  
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tctcctgaga gtgagatcac 20

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<400> 112  
catttcaccc ttgccaag 20

<210> 113  
<211> 20  
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&lt;223&gt; Antisense Oligonucleotide

&lt;400&gt; 113

tcatttccac ctttgcccaa

20

&lt;210&gt; 114

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Antisense Oligonucleotide

&lt;400&gt; 114

ttcatttcca cctttgccca

20

&lt;210&gt; 115

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Antisense Oligonucleotide

&lt;400&gt; 115

cttcatttcc acctttgccc

20

&lt;210&gt; 116

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Antisense Oligonucleotide

&lt;400&gt; 116

tcttcatttc cacctttgcc

20

&lt;210&gt; 117

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Antisense Oligonucleotide

&lt;400&gt; 117

ttcttcattt ccacctttgc

20

&lt;210&gt; 118

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Antisense Oligonucleotide

&lt;400&gt; 118

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<223> Antisense Oligonucleotide

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<213> Artificial Sequence

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<223> Antisense Oligonucleotide

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<400> 121

tactttcttc atttcacct

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<210> 122

<211> 20

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<223> Antisense Oligonucleotide

<400> 122

gtactttctt catttccacc

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<210> 123

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tccaacatgc ctctcttcat

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<210> 131

<211> 20

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<220>

<223> Antisense Oligonucleotide

<400> 131

cattactttc ctttaagaaa

20

<210> 132

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 132

caacacccac ctgctgtatt

20

<210> 133

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 133

ctggtacagc ctatttataa

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<210> 137  
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<400> 137  
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<210> 138  
<211> 20  
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<400> 139  
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aacatgcctc tcttc

15

<210> 141

<211> 15

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 141

tactttcctt taaga

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<210> 142

<211> 15

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 142

cacccacctg ctgta

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<210> 143

<211> 15

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 143

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<210> 144

<211> 15

<212> DNA

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<220>

<223> Antisense Oligonucleotide

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<211> 15

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<220>

<223> Antisense Oligonucleotide

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<210> 146
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<400> 146
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<210> 147
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<220>
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<400> 147
tcatggacct gtaaa 15

<210> 148
<211> 15
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<220>
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<400> 148
ttctttttaat agcct 15

<210> 149
<211> 650
<212> DNA
<213> R. norvegicus

<220>
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<222> (94)...(558)

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gtttccgaggc cgccgcgcgt ctcccgggga agc atg gcg atg aag gcc gtg tgc 114
Met Ala Met Lys Ala Val Cys
1 5

gtg ctg aag ggc gac ggt ccg gtg cag ggc gtc att cac ttc gag cag 162
Val Leu Lys Gly Asp Gly Pro Val Gln Gly Val Ile His Phe Glu Gln
10 15 20

aag gca agc ggt gaa cca gtt gtg gtg tca gga cag att aca gga tta 210
Lys Ala Ser Gly Glu Pro Val Val Ser Gly Gln Ile Thr Gly Leu
25 30 35

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act gaa ggc gag cat ggg ttc cat gtc cat caa tat ggg gac aat aca 258  
 Thr Glu Gly Glu His Gly Phe His Val His Gln Tyr Gly Asp Asn Thr  
 40 45 50 55

caa ggc tgt acc act gca gga cct cat ttt aat cct cac tct aag aaa 306  
 Gln Gly Cys Thr Thr Ala Gly Pro His Phe Asn Pro His Ser Lys Lys  
 60 65 70

cat ggc ggt cca gcg gat gaa gag agg cat gtt gga gac ctg ggc aat 354  
 His Gly Gly Pro Ala Asp Glu Glu Arg His Val Gly Asp Leu Gly Asn  
 75 80 85

gtg gct gct gga aag gac ggt gtg gcc aat gtg tcc att gaa gat cgt 402  
 Val Ala Ala Gly Lys Asp Gly Val Ala Asn Val Ser Ile Glu Asp Arg  
 90 95 100

gtg atc tca ctc tca gga gag cat tcc atc att ggc cgt act atg gtg 450  
 Val Ile Ser Leu Ser Gly Glu His Ser Ile Ile Gly Arg Thr Met Val  
 105 110 115

gtc cac gag aaa caa gat gac ttg ggc aaa ggt gga aat gaa gaa agt 498  
 Val His Glu Lys Gln Asp Asp Leu Gly Lys Gly Gly Asn Glu Glu Ser  
 120 125 130 135

aca aag act gga aat gct gga agc cgc ttg gct tgt ggt gtg att ggg 546  
 Thr Lys Thr Gly Asn Ala Gly Ser Arg Leu Ala Cys Gly Val Ile Gly  
 140 145 150

att gcc caa taa acattcccta tgtggtctga gtctcagact catctgctgt 598  
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<211> 2026

<212> DNA

<213> R. norvegicus

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 cctcagaatt aaatcctgcc tcctgagtgt agcagaacat gcagttttat gcatgagctc 240  
 ttgggagacc acagagattt caatttttaa aagagacagt tttctttttt agttgagaaa 300  
 acaactttta cgggtcccag ctccggaaaa aaaaaaaaaa aagaaagaaa caacttttaa 360  
 aagagacaat tctgttttta gttaagaatt ctctctctta ctgataccct ttcttggctc 420  
 cagggactcc ccatatatct ttctagacat ttctgagaac tcaagtaaat atatggtgat 480  
 gtctcccccac ctttttttgt agtttgtacc ttttgctcat tccataccgt cttagaaaat 540  
 atcttccttg aagcactatg tctcaccag tgcattggagt ttcacaaatg acttcatcag 600  
 gcatcttgtt ctccagcgca ggctgtctga gaacacttca acaggcaaaag aggatacgaa 660  
 tggtactatg aagtaacacg actgggggat gtgggcagac gactaatcgt atactgatat 720  
 ggggtactgag acggagggtg ctgagacgga ggatctcaaa tgaagtttag tcccatctct 780  
 aaagttaaaa gaaagccagg tacacgcctc taaccccagc aactgggagg cagaggtcag 840  
 aggcaggag agccctgtga gtttgaggtc gctggtctgc ataatagatt ctgtgatagc 900  
 caaggtatata acggtgtgat attttttaaa ggaggtgtgt caaccggcag agcacatgtc 960  
 tgtcacgagg ggtgtgtgta gtcaaattccc cagtaccaag taacaaaaaac attagtgaag 1020  
 aataagtaac gtgatattgtg cccaggaatt agaaacctgc agagaggggt tggggattta 1080



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gctcagtggt agacggcttg cctaggaagc gcaaggccct gggttcgatt cccagctcc 1140
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gagacacaga ggtgtgtctg gagatagaac atgggcctta cacatattac accgagcatc 1260
catcttggtt caccccaact ttcacacagc aactgcggcg cgctgcaaag tcagtcgcaa 1320
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ggcggcgcgg actagggag cggggcgcgg cggggacctt cggcgggtct ctgcgcccc 1980
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<210> 151  
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 <212> DNA  
 <213> R. norvegicus

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gcctgacaca gtgcagtagc catccatttc ctagtctga cattgagctg ccccttttg 180
ttcctctggg tgcttttcaa gtgctgttga gtccaggtgt ctgcacacgt gcacttgga 240
acaagtgtta gggccgatgg gtagggaggg agaggcctag agctaagcag ctctagagtc 300
accctggagg aaatgggtct acttggattt ggacataggt ttgattttgt tttgtttttt 360
gcattgtgcc tttttcatgt gattcagagt attacacaaa cttgatgtct tatttttgta 420
ttttttaaat aaggcaagcg gtgaaccagt tgtggtgtca ggacagatta caggattaac 480
tgaaggcgag catgggttcc atgtccatca atatggggac aatacacaag gtaggtccta 540
ggctggctag 550

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<210> 152  
 <211> 338  
 <212> DNA  
 <213> R. norvegicus

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<400> 152
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tttgtttttt gacttgtgcc ttttactgtg attcagaagt attaacacaa acttgatgtc 120
ttaatttttg tattttttta aataaaggca agcgggtgaac cagttgtggt gtcaggacag 180
attacaggat taactgaagg cgagcatggg ttccatgtcc atcaatatgg ggacaataca 240
caaggtaagt cttaatctat ctctacctgg tctgactagt gagatgaatg ggtcagagtc 300
aggaccaatt actaaccatt taaaaccatc aattttttt 338

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<210> 153  
 <211> 799  
 <212> DNA  
 <213> R. norvegicus

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<400> 153
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tgacagtcta gtgaaaaagc gggtagcttg aaaattgcaa ggccatatag tccagcctat 120
ttgtaccagg gtgctgcttc ctgtttgtat cactccagca cataccagct ccatgtttgc 180
tgtgttgga gttgtaagaa ttccgatgtc attgcataca gaggtttact tcataatctg 240
actgctggtt tctggttaata ggctgtacca ctgcaggacc tcattttaat cctcactcta 300
agaaacatgg cgggccagcg gatgaagaga ggtgagcagc attctctcat gcatggtggt 360

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ggagaggggt ctgtggaaaa cacctgaaga cagaactgag tggctctact gccttttctt 420
ttgtatgttt ccattcaccc aactcccaca tcccgaagta ctggaatagt ttatatggg 480
tgaaggagct gacaaatgtg gactcttaag tgatttagtt ttgtagcatt tattgaagat 540
gaactaatac aagtgccaaa aggaaccaat acagaaaata tcatggataa cagtactatc 600
acgtcactag caaaggtaaa tcattgtata atatcattaa tgcagattaa taaaaactag 660
ttgagattcc gtttgtatgt gaaccttagg aagtccttca tattaagagg ctagctcttt 720
gaatgagctg gagcaaacct tcgtaatcag gagctgcata cttcgtaacc tcgaagtgcc 780
ttcttctaga gcagagtga                                     799

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 <212> DNA  
 <213> R. norvegicus

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agagcattcc atcattggcc gtactatggt ggtaagtttc catatagtag tagatgtagg 180
atcttcttcta acatagtatt gtacctttcc atgacttcgt ggtgggtggt aaactagttc 240
ctaaaagatc acataaattg gtaagatgtt cagaatagga aaaaatatta ttttattgga 300
tgtaatagta aagaattaat ttgcctagtc agttaagaac gctcgttctg ctcgaagtgc 360
tggtagaaaag ctggttacat ttgatcagac tggatctgag ttgaggatac aatagtcttt 420
agtttaaaac agctggattt tcttgccatg attgccccct tacagttaat catttc 476

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<210> 155  
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 <212> DNA  
 <213> R. norvegicus

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tacttgatca cagaaaaccta aatgttctta attcttttca aaggtccacg agaaacaaga 180
tgacttgggc aaaggtggaa atgaagaaag tacaaagact ggaaatgctg gaagccgctt 240
ggcttgtggt gtgattggga ttgccaata aacattccct atgtggtctg agtctcagac 300
tcctctgctg tcctgctaaa ctgtagaaac caaaccatta aactgtaatc ttaacagttg 360
ttccaatgtg tgtgcatccc tttgcttact gctaaggcat ccgtgagtga gaggtgctac 420
gagtaggttt ggaggtatgt ggttgacaat tcctgaatgt gtacaactct tagaactaaa 480
tagtgttgtt ttctgtgccc agaccctcac tgggtggttt aagctgaaat ttctctttca 540
agcctctctc tctctctgtg tgtgtgtctg tgtgtgtgtg tgtgtgtgtg tgtgtgtgtg 600
agagagagag actgagactt atttagagct                                     630

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<210> 156  
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 <212> DNA  
 <213> R. norvegicus

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<400> 156
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atagcataaa aattagctta ttgatttact aatagatttg aacattttct aatatacatg 120
gtcctttgaa gtattgctgg gaagaagtgc taattacttg atcaccgaaa cctaaatggt 180
cttaattctt ttcaaaggtc cacgagaaac aagatgactt gggcaaagggt ggaaatgaag 240
aaagtacaaa gactggaaat gctggaagcc gcttggcttg tgggtgtgatt gggattgccc 300
aataaacatt ccctatgtgg tctgagctct agactcatct gctgtcctgc taaactgtag 360
aaaaaaacca aaccattaaa ctgtaatctt aacagttggt aactgtgtga ctcttttgac 420
ttgctctaag gacttgcagt gagaggtgac tgacgatgtt tggaggatgt gtagaacttc 480
ctgaatgtgt acaactcatt gaactaaaat ctgttgtttc tgtgccagac ctcactggtg 540
taag                                     544

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<210> 157  
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<220>  
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<400> 157  
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20

<210> 158

<220>

<400> 158  
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<210> 159  
<211> 16  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> PCR Primer

<400> 159  
tgctgaaggg cgacgg

16

<210> 160  
<211> 19  
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<220>  
<223> PCR Primer

<400> 160  
gttcaccgct tgccttctg

19

<210> 161  
<211> 23  
<212> DNA  
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<220>  
<223> PCR Probe

<400> 161  
ccggtgcagg gcgtcattca ctt

23

<210> 162  
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<220>  
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<400> 162  
cgcaggaaac gaaggtgcaa 20

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<212> DNA  
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<220>  
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<400> 163  
gccgcaggaa acgaaggtgc 20

<210> 164  
<211> 20  
<212> DNA  
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<220>  
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<400> 164  
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<210> 165  
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<220>  
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<400> 165  
ttcatcgcca tgcttccccg 20

<210> 166  
<211> 20  
<212> DNA  
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<220>  
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<400> 166  
acggccttca tcgcatgct 20

<210> 167  
<211> 20  
<212> DNA  
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<220>  
<223> Antisense Oligonucleotide

<400> 167  
cacacggcct tcacgcat 20

<210> 168

<211> 20  
<212> DNA  
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<220>  
<223> Antisense Oligonucleotide

<400> 168  
tcagcacgca cacggccttc 20

<210> 169  
<211> 20  
<212> DNA  
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<220>  
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<400> 169  
gcccttcagc acgcacacgg 20

<210> 170  
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<212> DNA  
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<220>  
<223> Antisense Oligonucleotide

<400> 170  
gtcgcccttc agcacgcaca 20

<210> 171  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Antisense Oligonucleotide

<400> 171  
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<210> 172  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Antisense Oligonucleotide

<400> 172  
ctgctcgaag tgaatgacgc 20

<210> 173  
<211> 20  
<212> DNA  
<213> Artificial Sequence

&lt;220&gt;

&lt;223&gt; Antisense Oligonucleotide

&lt;400&gt; 173

cttgccttct gctcgaagtg

20

&lt;210&gt; 174

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Antisense Oligonucleotide

&lt;400&gt; 174

caccgcttgc cttctgctcg

20

&lt;210&gt; 175

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Antisense Oligonucleotide

&lt;400&gt; 175

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20

&lt;210&gt; 176

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Antisense Oligonucleotide

&lt;400&gt; 176

acaactgggtt caccgcttgc

20

&lt;210&gt; 177

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Antisense Oligonucleotide

&lt;400&gt; 177

taatctgtcc tgacaccaca

20

&lt;210&gt; 178

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Antisense Oligonucleotide

&lt;400&gt; 178

tcctgtaatc tgtcctgaca 20

<210> 179  
<211> 20  
<212> DNA  
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<220>  
<223> Antisense Oligonucleotide

<400> 179  
ttaatcctgt aatctgtcct 20

<210> 180  
<211> 20  
<212> DNA  
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<400> 180  
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<210> 181  
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<212> DNA  
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<220>  
<223> Antisense Oligonucleotide

<400> 181  
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<210> 182  
<211> 20  
<212> DNA  
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<220>  
<223> Antisense Oligonucleotide

<400> 182  
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<210> 183  
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